

REMARKS

In response to the Office Action mailed on November 15, 2005, Applicants have amended Claims 2, 4, 6, 7, 8, 9, 10, 12, 14, 19 and 22; added new Claims 27 – 34 and cancelled Claim 18. Claims 2, 4, 6 – 10, 12, 14, 19 – 34 are presently pending and presented for consideration.

Claims 2, 4, 6, 7, 8, 9, 12, 14, 18 – 25 were rejected for being anticipated by USPN. 4,800,110 to DuCorday (hereinafter DuCorday). In addition, Claims 2, 4, 7, 8, 10, 12, 14, 18 – 24 and 25 were also rejected for being anticipated by USPN. 5,678,861 to Werner (hereinafter Werner). Reconsideration of these rejections is respectfully requested.

Amended Claim 2 is directed to an “adhesive binding member for use in binding a stack of sheets” that is made in accordance with method further recited in Claim 2. The method recites, among other things, that a layer of molten, heat-activated adhesive is applied to the substrate followed by cooling of the adhesive to that the adhesive is in a “solid state”. The claim goes on to recite that “subsequent to the cooling and prior to the application of the binding member to a stack to be bound, mechanically deforming a surface of the layer of adhesive to a degree such that curling of the binding member along the transverse axis is substantially reduced”.

As explained in detail in the subject application starting at page 1, line 4, the mechanical deformations are made after the molten adhesive is cooled. It has been found that this sequence greatly enhances the degree of curl reduction. Clearly, this sequence of steps produces a binding member having physical properties which differ from that of binding devices made using a different sequence. The following quotation from the MPEP is believed to be directly on point:

“The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (sic. 1969)”. MPEP at 2113.

In rejecting Claim 2 the Examiner noted that it is the “patentability of the product that is in issue, not the patentability of the process steps employed to prepare the product”. (Office Action at page 2.) Applicants agree with the Examiner on this point and believe that the structure of the claimed binding device differs from that of DuCorday. As noted in the Amendment mailed on June 17, 2005, it appears very likely from the appearance of grooves 34 and 36 (Fig. 1 of DuCorday) that the grooves were formed either using an appropriately sized die through which the adhesive is applied to the spine section 16 or formed using a knife while the applied adhesive is still molten. This is strongly suggested by the language in DuCorday starting “ ... the temperature sensitive glue strip is formed into separate but continuously longitudinally interconnected beads, each of which can be individually removed from spine 16 and detached from an adjacent bead ...”. (Col. 5, line 37 et seq) Note that the adhesive “beads” are “formed” (not the grooves), with the only reasonable manner of carrying out this step being while the adhesive is still in a molten state, during or just after application of the adhesive to spine 16.

Thus, there clearly is no teaching or suggestion in DuCorday of a binding member having the structure of the binding member of Claim 2. In that the grooves in DuCorday are provided so that individual adhesive segments may be peeled away and are not provided for curl reduction, Applicants submit that there would be no motivation by one skilled in the art to somehow modify DuCorday to arrive at the claimed invention.

Although not relied upon in the present rejection, previously cited USPNo. 4,471,976 to Giulie (hereinafter Giulie) differs from the claimed invention in the same manner. There is no teaching in Giulie that the peaks 16 and valleys 17 formed in the adhesive 15 (Fig. 3) were formed after the adhesive cooled. On the contrary, it appears most likely that the features were created at the time the molten adhesive was applied since no cutting or other penetrating device would appear capable of forming the rounded appearance of the peaks 16. Further, since the function of the valleys 17 and peaks 16 of Giulie has nothing to do with reducing curl, there would be no motivation to somehow modify Giulie to arrive at the claimed invention,

Claim 2 was also rejected for being anticipated by Werner. According to the Examiner, Werner shows, among other things, a “substrate 21 with heat activated adhesive 25 thereon”. (Page 3 of Office Action.) In fact, adhesive 25 is not heat activated but, rather, is pressure activated as noted at col. 4, line 42 and again noted at Col. 5, line 64. Further, in

reference to the cuts 33 in the pressure sensitive adhesive, the Office Action states that “Werner specifically teaches these deformities in order to reduce curl (see Column 6, lines 35-38).” (Page 3 of Office Action). Actually, as clearly stated in the very section cited in the Office Action, the purpose of the cuts 33 in the adhesive 25 and underlying substrate member 21 (See Figs. 11 and 12) is to permit “a user to fold over relatively short – and much more manageable – strip portions 29, 31, 51, 53 in sequence”. (Col. 6, line 35 et seq).

It is clear that Werner has nothing whatsoever to do with reducing curl in anything, much less reducing curl in a binding device using heat activated adhesive as recited in Claim 2.

In view of the foregoing, it is submitted that Claim 2 is patentable in view of the cited prior art. In addition, Claims 4 and 27, each of which depends directly from Claim 2 and add patentably significant limitations to the claim, are also believed to be allowable.

Rejected independent Claim 6 has been amended and is directed to a “binding member” which includes a “substrate” and “a layer of heat activated adhesive disposed on a first surface of the substrate ...”. The adhesive layer contains “mechanical deformities of a nature to substantially reduce curling along the transfers axis”. A “second surface of the substrate, opposite the first surface of the substrate, being substantially smooth in at least some of the second surface regions that are opposite the mechanical deformations in the adhesive”. As can be seen in Fig. 5 of the subject application, for example, the outer surface of substrate 22 is “substantially smooth” in all regions, including those regions opposite grooves 44.

As previously noted, the grooves 34 and 36 formed in the adhesive 26 of DuCorday (Fig. 1) permit adhesive segments or beads to be peeled away from spine 16. Each of the grooves 34 and 36 disposed between the adhesive segments has a respective corresponding fold line 46 and 48 in spine or substrate 16. These fold lines 46 and 48 facilitate accurate folding of the spine along the edge of the remaining adhesive after one or both adhesive segments have been peeled away (Col. 5, line 41 et seq.).

As can be seen in Figs 3 and 4 of Giulie, fold lines 15 are formed in substrate 19 opposite each of the “valleys” 17 in the adhesive 14 intermediate the “peaks” 16. Further, there would be no motivation to remove the fold lines of DuCorday or Giulie since doing so would greatly detract from the objective of these two references which is to facilitate folding

in the substrate in the regions opposite the adhesive grooves. As previously noted, Werner utilizes a pressure sensitive adhesive and is thus not pertinent to the invention of Claim 6.

For the foregoing reasons, it is submitted that amended Claim 6 is allowable over the cited prior art as are Claim 7 – 10 and 29 which depend, either directly or indirectly from allowable Claim 6 and add patentably significant limitations to the claim.

Rejected Claim 12, which has also been amended, is directed to a “binding member applied to a stack of sheets” made in accordance with the method set forth in the claim. Among other things, the method includes the sequence of “cooling the layer of molten adhesive so that the layer is in a solid state” followed by “mechanically deforming an exposed surface of the adhesive layer to an extent curling of the substrate about the transverse axis is substantially reduced”. As noted above in connection with Claim 2, this provides a structural change in the adhesive which is neither taught nor suggested by the prior art. Thus, Claim 12 is believed to be allowable.

Rejected Claim 14 has been amended and is directed to a binder strip made in accordance with the recited method which includes a sequence of cooling the adhesive followed by forming a “multiplicity of grooves in an exposed surface of the adhesive layer”. Thus, for at least substantially the same reasons noted above in connection with Claims 2 and 12, it is submitted that Claim 14 is also allowable.

Rejected Claim 19 is directed to a binder strip having an “elongated substrate”. The claim has been amended to address the Examiner’s comment regarding the use of the open ended term “including”. As amended, the claim recites that the “elongated substrate includes a pair of opposing substrate edges parallel to the longitudinal axis with the substrate edges being unconnected to any structure separate from the substrate by means other than the heat-activated adhesive”. The “layer of heat activated adhesive” has a “multiplicity of grooves formed in an exposed surface of the layer which extend at least 20% of the way through the thickness of the adhesive”, with the adhesive “extending substantially a full length of the substrate along the longitudinal axis”.

With respect to DuCorday, the structure upon which the adhesive is deposited 26 does not meet the limitations in amended Claim 19 regarding the “elongated substrate.” Further, there would be no motivation to modify DuCorday in some manner to provide such as substrate since an essential feature of the DuCorday structure is to provide a cover 22 connected to structure supporting the adhesive. With respect to Guilie, the adhesive 14 does

not extend “substantially a full length of the substrate along the longitudinal axis” of binder element 12 as claimed, but rather runs the full length of the transverse axis. Again, given the nature of the Guilie apparatus, there would be no motivation to change the shape of binder element 12. Finally, for the previously stated reasons, Werner is not pertinent.

For the above-noted reasons, Claim 19 is believed to be patentable as are Claims 30, 31 and 32 which depend, either directly or indirectly from Claim 19 and add patentably significant limitations to the claim.

Rejected Claim 20 is also directed to a binding member made in accordance to the recited method. That method includes the previously described sequence of applying molten adhesive and, after cooling the adhesive, mechanically deforming the adhesive. As previously noted above in connection with Claim 2, this sequence provides a structure neither taught nor suggested by the cited prior art. Thus, Claim 20 is believed to be allowable as is Claim 21 which depends directly from Claim 20 and adds patentably significant limitations to the claim.

Rejected Claim 22 has also been amended and is also directed to an adhesive binding member. The binding member includes a layer of heat-activated adhesive “having an exposed surface containing mechanical deformities of a nature to substantially reduce curling of the binding member along the transverse axis”. In addition, the surface of the substrate opposite at least some of the deformations is “substantially smooth.” As previously noted, both the DuCorday and Guilie references have fold lines opposite each of the grooves formed in the adhesive for facilitating folding of the substrate/cover in the regions opposite the adhesive grooves, with removal of such fold lines significantly defeating the objective of these references. Again, Werner is not relevant.

Thus, Claim 22 is believed to be allowable as are Claims 33 and 34 which depend, either directly or indirectly from Claim 22 and add patentably significant limitations to the claim.

In conclusions, all pending claims are believed to be in condition for allowance and an early allowance is respectfully requested.

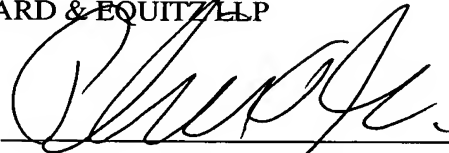
Respectfully submitted,

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